

COMMERCIAL CREW INTEGRATED CAPABILITY  
Announcement: NASA-CCiCap

- 50. Optional Period Goals: FAA certification could pose a schedule risk. The FAA is currently under a moratorium regarding regulation of orbital spaceflight, which extends through October 1, 2015. If the moratorium expires before the final crewed demonstration flight is completed, the FAA could impose regulations that would negatively impact the demonstration schedule. It is difficult to assess the potential impact, since it is possible that new regulations that are not known at this time could be created.**

**Will the final optional period goal (a crewed orbital demonstration flight) require additional Federal Aviation Administration certification should the moratorium expire prior to the flight, or will it only have to meet the industry certification proposed for CCiCap?**

**Answer:** Participants will be required to comply with any FAA regulations applicable at the time a crewed orbital flight demonstration is to take place. As a general matter, the FAA does not certify spacecraft; it licenses spacecraft operations. Current FAA licensing applies to the launch and reentry phases of flight, but does not address on-orbit operations as it is outside the current FAA statutory authority. The moratorium (51 USC Sec. 50905 (c) (3)) applies to the development of future human spaceflight regulations, but not with specific regard to the orbital phase of the mission. The FAA is working very closely with NASA and the Commercial Crew Program towards an inter-agency partnership for commercial human spaceflight. The primary objective of the partnership is to ensure consistency of NASA requirements and FAA regulations to preclude unnecessary overlap, duplication, or areas of conflict whereby promoting consistency for the industry at large.

- 51. Performance Milestones: The answer to question 13 in the previous round of questions and answers (regarding where to submit Performance Milestone information) states, “The preferred submission is for all information pertaining to the milestones to be submitted in Appendix 2 of the SAA.” The Performance Milestones section of the AFP similarly states that “The information described below should be submitted in the form of performance milestones in Appendix 2 of the draft SAA,” and then the rest of the instructions for that section describe the required performance milestone information. There are no instructions stating that any of this information should be discussed within Section II, Technical Approach, of the proposal. Thus, it seems as if none of the information described in the Performance Milestones section of the AFP should be included in Section II, Technical Approach, in the proposal.**

**If this is the case, it is unclear why Performance Milestones is listed as a subsection of the Technical Approach in the outline on page 11 of the AFP, which shows:**

COMMERCIAL CREW INTEGRATED CAPABILITY  
Announcement: NASA-CCiCap

**Section II: Technical Approach**

**Overall Concept and Performance**

**Development and Demonstration Plan**

**Safety and Mission Assurance**

**Performance Milestones**

**Please clarify what part of the information described in the Performance Milestones section of the AFP is to be provided in the 50 pages of the proposal, and what information is to be provided in Appendix 2.**

**Answer:** The proposed milestones should not be described within the 50 page limit of the proposal, they should be included in Appendix 2 of the SAA. Performance Milestones are described in Section II, *Technical Approach* because they are evaluated as part of the technical approach evaluation. The performance milestones in Appendix 2 of the SAA are expected to provide the information described in 5.2.3 *Section II: Technical Approach, Performance Milestones*. The evaluation of technical approach will include the milestone information provided in Appendix 2.

**52. Safety and Mission Assurance: Will it be possible to conduct and complete a phase 1 and phase 2 SRP under the CCiCap SAA?**

**Answer:** If the Participant proposes to conduct and complete ISS Phase 1 and Phase 2 Safety Review Panels, then the Participant will need to enter into a Reimbursable Space Act Agreement with the ISS Program. However, if a Participant proposes to conduct and complete Participant-defined safety reviews, and this is agreed to in the awarded SAA, then these reviews will be conducted and completed under the CCiCap SAA.

**53. The termination Article 16, paragraph C, allows NASA to terminate if a milestone represents unacceptable risk to human life. What is the level of safety that is acceptable to NASA? How can I show my milestone to be “safe?”**

**Answer:** Working within the structure of an SAA, NASA will only have the insight, quarterly reviews, and milestone reviews as the basis for understanding the implementation of the Partner’s proposed approach and the progress they are making with their CTS. As a result, NASA is not in a position to accept the level of risk represented during the performance of a milestone activity. The acceptance of risk is the responsibility of the participant. However, since NASA is an investor, it is obligated to take action when the insight and reviews suggest unacceptable risk to human life. Therefore, the article addresses a NASA determination that, based on the insight provided under the SAA, there is an unacceptable level of risk to human life; not a determination

COMMERCIAL CREW INTEGRATED CAPABILITY  
Announcement: NASA-CCiCap

that there is an adequate level of safety. As a result, NASA is requesting risk reduction activities as an important part of the milestones. Therefore, the participant's responsibility for acceptance of risk and for implementation of risk reduction activities, should include demonstration of how/why the planned milestone activity is acceptable with respect to human life.

The AFP describes the minimum expectations for Performance Milestone content and associated risk reduction activities, as well as a description of the methods for assessing risk for human life. In addition, some examples of risk reduction activities are: demonstration that participant is working to the established certification plan; readiness type reviews that clearly define goals, resolution of prior issues supporting test/analysis results, verification of system readiness.

**54. The instructions for the Development and Demonstration Plan on page 12 of the AFP say to “Describe how an orbital crewed demonstration flight will be accomplished and the approach to meeting the goals from Section 3 of the announcement or proposed alternatives, including explanatory rationale.” Section 3 of the AFP includes 4 subsections with different types of goals: strategic goals, base period goals, optional period goals and an overall safety goal. Is the intent of the above AFP requirement to address all of these goals, or just the optional period goals (section 3.3) that relate to an orbital-crewed demonstration flight?**

**Answer:** The intent of the AFP description on how an orbital-crewed demonstration addresses the goals in section 3 is that all of the goals including the strategic goals, base period goals, optional goals and overall safety goals are complementary to each other under the CCiCap effort in both the base and optional periods. Therefore, the orbital-crewed demonstration will need to consider all the goals of section 3.